

What is claimed is:

1. A holder for materials for use in a measuring instrument, said holder comprising:

an intermediate housing member comprising:

a generally horizontal member;

an upper wall extending upwardly from an upper surface of the generally horizontal member, the upper wall defining a first recess adjacent the upper surface having a first diameter and a second recess adjacent the first recess having a second diameter, the second diameter being greater than the first diameter; and

a lower wall extending downwardly from a lower surface of the generally horizontal member, the lower wall defining a third recess adjacent the lower surface having a third diameter and a fourth recess adjacent the third recess having a fourth diameter, the fourth diameter being greater than the third diameter;

an upper housing member comprising a generally horizontal member and a wall extending upwardly from an upper surface of the generally horizontal member, the wall defining a material holding chamber, the upper housing member being seated within the second recess of the intermediate housing member;

a lower housing member comprising a generally horizontal member, the lower housing member being seated within the fourth recess of the intermediate housing member;

a first winding assembly disposed within a first cavity defined by the first recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the upper housing member; and

a second winding assembly disposed within a second cavity defined by the third recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the lower housing member.

2. The holder of Claim 1 wherein the upper housing member has an outer diameter which is generally equal to or slightly larger than the second diameter of the second recess so as to create a frictional fit between the intermediate housing member and the upper housing member.

3. The holder of Claim 1 wherein the lower housing member has an outer diameter which is generally equal to or slightly larger than the fourth diameter of the fourth recess so as to create a frictional fit between the intermediate housing member and the lower housing member.

4. The holder of Claim 1 wherein the intermediate housing member and the upper housing member are electron-beam welded together and wherein the intermediate housing member and the lower housing member are electron-beam welded together.

5. The holder of Claim 1 wherein the first winding assembly comprises a pair of oppositely arranged lead-out connector ribbons and wherein the upper

wall of the intermediate housing member includes a pair of oppositely arranged slots to allow the lead-out connector ribbons to emerge therethrough.

6. The holder of Claim 1 wherein the second winding assembly comprises a pair of oppositely arranged lead-out connector ribbons and wherein the lower wall of the intermediate housing member includes a pair of oppositely arranged slots to allow the lead-out connector ribbons to emerge therethrough.

7. The holder of Claim 1 wherein the second recess of the intermediate housing member has a beveled upper edge so as to facilitate insertion of the upper housing member therein.

8. The holder of Claim 1 wherein the fourth recess of the intermediate housing member has a beveled lower edge so as to facilitate insertion of the lower housing member therein.

9. The holder of Claim 1 wherein an inner surface of the wall of the upper housing member includes a shoulder therein which is arranged to receive and support a cover.

10. The holder of Claim 1 wherein the upper housing member, the intermediate housing member and the lower housing member are formed from an alloy comprising about 80% platinum and about 20% iridium.

11. The holder of Claim 1 wherein one of the first winding or the second winding comprises a heating winding and the other of the first winding or the second winding comprises a heat-sensing winding.

12. The holder of Claim 1 further comprising a center post and a washer member attached to the lower housing member.

13. A housing for a material holder, said housing comprising:

an intermediate housing member comprising a generally horizontal member, an upper recess and a lower recess;

an upper housing member comprising a generally horizontal member and a wall defining a material holding chamber, the upper housing member being seated within the upper recess of the intermediate housing member;

a lower housing member comprising a generally horizontal member, the lower housing member being seated within the lower recess of the intermediate housing member;

wherein the upper recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the upper housing member define a first cavity adapted to receive a first winding assembly; and

wherein the lower recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the lower housing member define a second cavity adapted to receive a second winding assembly.

14. The holder of Claim 13 wherein the upper housing member has an outer diameter which is generally equal to or slightly larger than a diameter of a portion of the upper recess so as to create a frictional fit between the intermediate housing member and the upper housing member.

15. The holder of Claim 13 wherein the lower housing member has an outer diameter which is generally equal to or slightly larger than a diameter of a portion of the lower recess so as to create a frictional fit between the intermediate housing member and the lower housing member.

16. The holder of Claim 13 wherein the intermediate housing member and the upper housing member are electron-beam welded together and wherein the intermediate housing member and the lower housing member are electron-beam welded together.

17. The holder of Claim 13 wherein the upper recess of the intermediate housing member has a beveled upper edge so as to facilitate insertion of the upper housing member therein.

18. The holder of Claim 13 wherein the lower recess of the intermediate housing member has a beveled lower edge so as to facilitate insertion of the lower housing member therein.

19. The holder of Claim 1 wherein an inner surface of the wall of the upper housing member includes a shoulder therein which is adapted to receive and support a cover.

20. The holder of Claim 1 wherein the upper housing member, the intermediate housing member and the lower housing member are formed from an alloy comprising about 80% platinum and about 20% iridium.

21. A holder for materials for use in a measuring instrument, said holder comprising:

- a three-piece housing consisting of an upper housing member, an intermediate housing member and a lower housing member, the three-piece housing defining a first cavity and a second cavity;

- a first winding assembly disposed within the first cavity; and

- a second winding assembly disposed within the second cavity.

22. The holder of Claim 21 wherein the intermediate housing member and the upper housing member are electron-beam welded together and wherein the intermediate housing member and the lower housing member are electron-beam welded together.

23. The holder of Claim 21 wherein the upper housing member, the intermediate housing member and the lower housing member are formed from an alloy comprising about 80% platinum and about 20% iridium.

24. The holder of Claim 21 wherein one of the first winding or the second winding comprises a heating winding and the other of the first winding or the second winding comprises a heat-sensing winding.

25. The holder of Claim 21 further comprising a center post and a washer member attached to the lower housing member.

26. A method for fabricating a holder for materials for use in a measuring instrument, said method comprising the steps of:

- providing an intermediate housing member comprising a generally horizontal member, an upper recess and a lower recess;

- disposing a first winding assembly within the upper recess;

- seating an upper housing member comprising a generally horizontal member and a wall defining a material holding chamber within the upper recess in order to define, with the upper recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the upper housing member, a first cavity with the first winding housed therein;

- disposing a second winding assembly within the lower recess;

- seating a lower housing member comprising a generally horizontal member within the lower recess in order to define, with the lower recess, the generally horizontal member of the intermediate housing member and the generally horizontal member of the lower housing member, a second cavity with the first winding housed therein.

27. The method of Claim 26 further comprising the steps of:
electron beam welding the intermediate housing member and the upper housing member together; and
electron beam welding the intermediate housing member and the lower housing member together.
28. The holder of Claim 27 further comprising the step of creating a bevel in an upper edge of the upper recess of the intermediate housing member has so as to facilitate insertion of the upper housing member therein.
29. The holder of Claim 27 further comprising the step of creating a bevel in a lower edge of the lower recess of the intermediate housing member has so as to facilitate insertion of the lower housing member therein.
30. The holder of Claim 27 further comprising the step of creating a shoulder in an inner surface of the wall of the upper housing member, which shoulder is adapted to receive and support a cover.